

## Curriculum Vitae

**Yuancheng Xu**

Homepage: <https://yuancheng-xu.github.io/>

Email: xuyuancheng0@gmail.com

## EDUCATION

---

**Southern University of Science and Technology, China**

*2016-Present*

Major in Mathematics and Applied Mathematics

GPA 3.94/4.00 (ranking: 1/94)

**New York University**

*Spring, 2019*

Visiting Student at the Courant Institute of Mathematical Sciences

GPA 4.00/4.00 (including two PhD-level courses)

## RESEARCH EXPERIENCE

---

**Prof. Christina Ramirez's Group (Statistics and Machine Learning)**

July - Present

*UCLA-CSST Program*

*UCLA, Biostatistics Department*

- Independently designing a tree-based algorithm (Longtree) for longitudinal data with correlated features. The algorithm first selects features and then gives predictions using linear mixed effect model based recursive partitioning.
- Simulation of Longtree on datasets that includes auto-regressive structure and treatment-time interaction. Longtree greatly outperforms other tree-based methods for longitudinal setting such as RE-EM tree.

**Prof. Sukbin Lim's Lab (Computational Neuroscience)**

June – Sep, 2018

*Undergraduate Research program*

*NYU Shanghai, Neuroscience Department*

- Using the theory of differential equations to derive conditions for persistent activity in both parametric and spatial neural networks.
- Simulation of negative derivative feedback control model that attains persistent firing rate in the absence of stimulus using high-performance computing resources.
- Investigating spike-timing dependent plasticity (STDP) rule that can lead to persistent neural activity in parametric networks.

**Prof. He Bingsheng's Group (Optimization)**

Feb 2018

*Seminar on image processing*

*SUSTech, Mathematics Department*

- Learning how to develop mathematical models on graph denoising and graph restoring.
- Using optimization methods such as the alternating direction method of multipliers (ADMM) algorithm to solve the established model.

## STANDARD TESTS

---

TOEFL Test	106	(30 R, 28 L, 23 S, 25 W)	Aug 2018
GRE General Test	336+4.0	(166 V, 170 Q, 4.0 AW)	Sep 2017
CET-6	642		Dec 2017

## **SELECTED AWARDS**

---

Outstanding Undergraduate Scholarship (First Prize, 5%)	2017, 2018
Outstanding Freshmen Scholarship	2016
National Mathematical Olympiad (National Second Prize)	2015

## **COMPUTATIONAL SKILLS**

---

Python, MATLAB, R, JAVA, C, LaTeX, HTML.